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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/553,572

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Eric Maziers

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EXAMINER

LOPEZ, RICARDO E.

ART UNIT

PAPER NUMBER

1786

MAIL DATE

DELIVERY MODE

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/553,572	<b>Applicant(s)</b> MAZIER ET AL.	
	<b>Examiner</b> RICARDO E. LOPEZ	<b>Art Unit</b> 1786	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 01 July 2010.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 9-27 is/are pending in the application.
- 4a) Of the above claim(s) 16-27 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 9-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                    | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

***DETAILED ACTION***

***Response to Amendment***

1. Applicant's Amendments and Accompanying Remarks filed on July 01, 2010 has been entered and carefully considered. Claims 9 – 27 are pending in this application. Claims 16 – 27 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. After careful consideration of Applicant Remarks, the Examiner has maintained the rejections as detailed in the Office Action dated November 13, 2010.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 9 and 10 are rejected under 35 U. S. C. 102(b) as being unpatentable over Lai et al. US patent No 5,728,272.

4. Considering claims 9 and 10, Lai et al. teaches elastic substantially linear olefin polymers which have very good processability comprising ethylene homopolymers, wherein the polymer backbone is substituted with about 0.01 long chain branches/1000 carbons to about 3 long chain branches/1000 carbons, more preferably from about 0.01

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long chain branches/1000 carbons to about 1 long chain branches/1000 carbons, and especially from about 0.05 long chain branches/1000 carbons to about 1 long chain branches/1000 carbons (Abstract and Col. 3, lines 58-64).

Lai et al. also teaches that said linear olefin polymers do not have long chain branching. That is, the linear olefin polymer has an absence of long chain branching, as for example the traditional linear low density polyethylene polymers or linear high density polyethylene polymers made using Ziegler polymerization processes (Col. 3, lines 67-68).

Furthermore, Lai et al. teaches that the density of the said ethylene substantially linear olefin polymers is measured in accordance with ASTM D-792 and is generally up to about 0.97 g/cm.<sup>sup3</sup>, which is considered to be medium to high density polyethylene resins (Col. 4, lines 53-58).

Moreover, Lai et al. teaches that the substantially linear olefin polymers are made using constrained geometry catalyst polymerization, wherein said catalysts are considered to be in the family of metallocene catalysts, as it is considered by Applicant in the disclosure. Further, tetrahydroindenyl is included among the examples of constrained geometry catalysts taught by Lai et al. (Col. 9, lines 10-15).

Furthermore, Lai et al. teaches that among the useful articles made from the olefin polymers by using all of the conventional polyolefin processing techniques, there are films e.g., cast, blown and extrusion coated, fibers e.g., staple fibers, spunbound fibers or melt blown fibers and gel spun fibers, spunlaced fabrics or structures made from such fibers and molded articles (Col. 15, lines 21-30).

Therefore, Lai et al. anticipates all limitations in the instant claims.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 9 - 12, and 14 are rejected under 103 (a) as being unpatentable over Kimura et al. US patent No 5,861,202 in view of Lai et al. US patent No 5,728,272.

7. Considering claims 9 - 12 and 14, Kimura et al. teaches a laminated body comprising a uniaxially stretched laminate composed of (I) a first thermoplastic resin layer and (II) an adhesion layer which has a lower melting point than said first thermoplastic resin layer (I) (Abstract). The resins usable as the first thermoplastic resin layer (I) in Kimura et al.'s laminate are crystalline thermoplastic resins having stretchability and include crystalline and stretchable resins. Kimura et al. also teaches that ethylene homopolymer having a density of 0.94 to 0.98 g/cm<sup>3</sup>, considered to be medium to high density polymer, and an ethylene-based polymer such as a

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copolymer of mainly ethylene with other  $\alpha$ -olefins are among the preferred resins for layer (I)(Col. 3, lines 35-49).

Moreover, Kimura et al. also teaches the use of constrained geometry catalyst comprising a cyclopentadienyl skeleton for manufacturing the polymers used in the laminated (Col. 4, lines 23-31).

Furthermore, Kimura et al. teaches that the laminated is capable of enhancing the adhesion strength between the longitudinally and laterally split tapes of said laminated body and fabric and are excellent in low-temperature heat sealability (Col. 2, lines 18-21).

Kimura et al. does not specifically recite that first thermoplastic polyethylene resin in layer (I) is polyethylene resin having long chain branches.

Lai et al. teaches elastic substantially linear olefin polymers which have very good processability comprising ethylene homopolymers, wherein the polymer backbone is substituted with about 0.01 long chain branches/1000 carbons to about 3 long chain branches/1000 carbons, more preferably from about 0.01 long chain branches/1000 carbons to about 1 long chain branches/1000 carbons, and especially from about 0.05 long chain branches/1000 carbons to about 1 long chain branches/1000 carbons (Abstract and Col. 3, lines 58-64).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the linear olefin polymers having long branches taught by Lai et al. to make the uniaxially stretched laminate of Kimura et al. when it is desired to provide the polymer with good processability. The specific temperature range and the

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ratio of the roller's velocity in the stretching step would be a result effective variable related to the final application of the polymeric article been made and the specific equipment used in the manufacturing of said article.

8. Claims 13 and 15 are rejected under 103 (a) as being unpatentable over Kimura et al. US Patent No 5,861,202 in view of Lai et al. US Patent No 5,728,272 and further in view of Erderly et al. US Patent No 5,451,450.

9. Considering claims 13 and 15, Kimura et al. in view of Lai et al. is relied upon as set forth above in the 103 rejection of claim 11.

Kimura et al. in view of Lai et al. does not recognize the step of annealing the polyethylene film or tape following the stretching step.

Erderly et al. teaches elastic materials made from metallocene catalysts. Such materials are produced by conventional blown or cast film processes, as well as cast embossed. Thus, eliminating costly post extrusion or compounding steps (Col. 2, lines 47-50).

In a preferred embodiment, Erderly et al. teaches that the polyethylene film is annealed at a temperature between the film softening point and melting point. The annealing step is necessary to anneal or perfect the crystallites that survived the orienting step and to relax out stresses. This annealing aids in maintaining the orientation or extension induced in the orienting step. The annealing temperature is preferably less than the orienting temperature. Generally once the film leaves the

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annealing step, ambient cooling is sufficient. In most cases, the film from the annealing step is then spooled in a winding unit (Col. 9, lines 64-68 and Col. 10, lines 1-6).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the annealing step taught by Erderly et al. into the Kimura et al. in view of Lai et al. filament or film making process when it is desired to maintain the orientation or extension induced in the stretching step. The specific temperature range would be a result effective variable related to the final application of the polymeric article been made. This is especially true as the materials taught by Kimura et al. are heat sealed together and heat setting would make the materials more dimensionally stable during the sealing process.

### ***Response to Arguments***

10. Regarding Applicant's arguments with respect to claims 9 – 15, these have been considered but are found to be not persuasive for the following reasons.

Applicant traverses the rejections in previous Office Action on the basis that Lai does not teach a polymer having long chain branches, because as it is known in the art a long chain branched polyethylene is not a substantially linear polyethylene.

The Examiner respectfully submits that, as set forth above Lai does teach polyethylene polymers having long chain branches, described as "substantially linear". Lai defines the term "substantially linear" polymer as a polymer having a backbone that is substituted with about 0.01 long chain branches/1000 carbons to about 3 long chain



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branches/1000 carbons, more preferably from about 0.01 long chain branches/1000 carbons to about 1 long chain branches/1000 carbons, and especially from about 0.05 long chain branches/1000 carbons to about 1 long chain branches/1000 carbons [Col. 3, lines 57-64]. Lai also defines “linear olefin polymers” as olefin polymers that do not have long chain branches [Col. 3, line 65].

### ***Conclusion***

11. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to RICARDO E. LOPEZ whose telephone number is (571)-270-1150. The examiner can normally be reached on Monday to Thursday 8:00 am-5:30pm EST, and every other Friday from 8:00 am to 4:30 pm..

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13. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, D. Lawrence Tarazano can be reached on (571)-272-1515. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

14. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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September 05, 2010